Paper No. 17

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte JEFFREY A. KUSNITZ, JOHN A. MOORE and MARC SEGRE

Appeal No. 2001-0860
Application No. 08/772,047[1]

ON BRIEF

Before JERRY SMITH, FLEMING, and SAADAT, Administrative Patent Judges.

SAADAT, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the Examiner's final rejection of claims 1-12, which are all of the claims pending in this application.

We reverse.

[1] Application for patent filed December 19, 1996.

BACKGROUND

Appellants' invention is directed to a method and apparatus for enabling existing application programs for operation in speech recognition environments. As depicted in figure 2, a new speech enabled component 60, which supports the same interface or objects used by application program 50, is dynamically linked at the runtime and replaces one of existing components 58 (specification, page 6). The new component receives input from the speech recognition system and passes the input to application program 50 using the existing interfaces (id.). Thus, application program 50 receives the speech enabled input from the speech recognition program without noticing that it was not from a standard input device such as a keyboard or a mouse (specification, page 7).

Representative independent claim 1 is reproduced below:

1. A method, implemented in a computer system, for adding speech capability to an existing application program comprising the steps of:

providing said existing application program having a plurality of object-oriented components including an input component containing interface information that is loaded and dynamically linked at runtime, said object-oriented input component originally created having no speech capability;

creating a speech enabled object-oriented input component for said existing application program by supplying an alternate object-oriented dynamic library that supports the same interface information in said input component;

determining if speech recognition is installed on said computer system while maintaining the input component and the speech enabled object-oriented input component; and

replacing said object-oriented input component of said application program with said speech enabled input component at runtime to allow speech operation in said application program.

The Examiner relies on the following references in rejecting the claims:

Gen Kiyooka, "Object-Oriented DLL's" (OODLL), Byte, pp. 257-259, (December 1992).

Esther Schindler, "Computer Speech" (Speech), Chapters 12 and 13, pp. 221-294, (February 1996).

Claims 1-12 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Speech in view of OODLL.

Rather than reiterate the viewpoints of the Examiner and Appellants regarding the above-noted rejection, we make reference to the answer (Paper No. 16, mailed May 5, 2000) for the Examiner's reasoning, and to the appeal brief (Paper No. 15, filed February 22, 2000) for Appellants' arguments thereagainst.

OPINION

Appellants argue that the combination of Speech and OODLL, as proposed by the Examiner, is suggested by neither of the references and only use of hindsight would have supplied what is missing in the references (brief, page 4). Appellants further point out that while Speech provides an overview of what various

vendors offer in the field of speech recognition and lists "an intended result from using the product," the reference "fails to explain how the results are obtained" (brief, pages 4 & 5). Additionally, Appellants argue that OODLL merely teaches that users can use a linker to bind DLL's name into a program as long as the DLL has the right name and exports the right set of function (brief, page 5). Appellants further assert that the claimed enabling an existing object-oriented application program with speech capability by replacing an input component of the application program is not taught or suggested by the combination of the applied prior art (brief, page 6).

In response to Appellants' arguments, the Examiner asserts that Speech provides for "adding code to an existing code without the need to recompile" and teaches speech recognition by attaching a speech input feature to an existing application in combination with the Dynamic Link Library technology of OODLL (answer, page 7). The Examiner further reasons that since "the use of DLL is an old and well known way for adding software to existing programs at load or runtime without needing to recompile," it would have been obvious to one of ordinary skill in the art to include the use of DLL with the speech recognition capabilities taught by Speech (answer, page 9).

The initial burden of establishing reasons for unpatentability rests on the Examiner. In re Oetiker, 977 F.2d 1443, 1446, 24 USPQ2d 1443, 1445 (Fed. Cir. 1992). The Examiner must produce a factual basis supported by teaching in a prior art reference or shown to be common knowledge of unquestionable demonstration, consistent with the holding in Graham v. John Deere Co., 383 U.S. 1 (1966). Our reviewing court requires this evidence in order to establish a prima facie case. In re Piasecki, 745 F.2d 1468, 1471-72, 223 USPQ 785, 787-88 (Fed. Cir. 1984); In re Cofer, 354 F.2d 664, 668, 148 USPQ 268, 271-72 (CCPA 1966). However, "the Board must not only assure that the requisite findings are made, based on evidence of record, but must also explain the reasoning by which the findings are deemed to support the agency's conclusion." In re Lee, 277 F.3d 1338, 1344, 61 USPQ2d 1430, 1434 (Fed. Cir. 2002).

Our review of Speech confirms that the reference relates to speech-enabled applications that are available off the shelf. One example of such products is identified as Visual Voice which is a development tool using an object-oriented flow-chart development system (page 243). Speech further refers to Speech Wizard as a tool for adding speech input to Windows programs and to Phonetic Engine 500 (PE500) as a speech system that may also

be accompanied by its Software Development Kit (page 259 & 260). Examples of applications that control the PE500 are implemented as a Windows dynamic link library (SPOT) or as a custom control added to a form and define speech recognition characteristics (SPOT/VBX) (page 261). Therefore, the speech recognition applications disclosed by Speech are mainly software development kits that attach speech recognition capabilities to the existing applications. However, it is not clear from the disclosure of Speech what specific steps should be taken to incorporate such activities as a dynamic link library in an existing application having a plurality of object-oriented components. In fact, Speech provides for no detailed method of obtaining the speech recognizing application by dynamically linking the object-oriented input component of the application, as recited in the claims.

OODLL, on the other hand, relates to object-oriented dynamic link libraries for managing complex operating systems such as Windows. The article provides general information regarding the design and use of DLLs that shift the emphasis toward early specification of parameters and independent design of parts of a large software project (Page 257, right-hand column). Additionally, OODLL refers to different approaches for designing

DLLs such as run-time dynamic linking which does not resolve the name or the entry point until run time as well as binding the DLL's name into the program by early resolving the DLL's entry points (page 257, right-hand column through page 258, left-hand column). However, our review of the reference reveals no teaching or suggestion related to using an alternate speech enabled object-oriented dynamic library as a part of the input component of an application, as recited in claim 1.

As the Federal Circuit states, "[t]he mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification." In re Fritch, 972 F.2d 1260, 1266 n.14, 23 USPQ2d 1780, 1783-84 n.14 (Fed. Cir. 1992), citing In re Gordon, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984). The court further reasons in Karsten Mfg. Corp. v. Cleveland Gulf Co., 242 F.3d 1376, 1385, 58 USPQ2d 1286, 1293 (Fed. Cir. 2001) that for an invention to be obvious in view of a combination of references, there must be some suggestion, motivation, or teaching in the prior art that would have led a person of ordinary skill in the art to select the references and combine them in the way that would produce the claimed invention.

See also In re Fine, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988).

Based on these well-settled principles, we disagree with the Examiner that, because OODLL discusses the use of dynamic link libraries in software design, a speech-enabled object-oriented input component may be dynamically linked at runtime and replace the input component of the application. The Examiner's position that Appellants' failure to point out a single limitation that is not taught supports the conclusion that the combination of the two applied references discloses the claimed subject matter (answer, page 9), improperly places the burden of proving patentability on Appellants before a prima facie case of obviousness is presented by the Examiner. Although Speech discusses various object-oriented development tools for building speech-enabled applications without the need to write any source code or modify the underlying application program, the Examiner has failed to establish why one of ordinary skill in the art would have found it obvious to incorporate the DLLs of OODLL article as the claimed dynamically linked speech enabled input component in the speech recognition applications and system development tools of Speech.

Even if the Examiner is contending that defining the interface between the programs is the underlying requirement for adding libraries to an application (answer, page 15), such assertion does not provide a reason or motivation for combining the teachings of the applied prior art. The Speech reference introduces various development tools for adding speech enabled features to an existing product without the need to recompile and, at best, mentions implementation of such tools as a dynamic link library. Speech, in fact, merely discusses the existence of such tools without any details of how the development tools may be used for adding the speech enabled input component while OODLL merely discusses two different approaches for designing DLL interface, i.e., fewer polymorphic entry points vs. separately named entry points for each function. We agree with Appellant (brief, page 6) that these disparate references to speech recognition and DLLs fail to teach or motivate one of ordinary skill in the art to replace an input component of the application program with one having an alternate object-oriented dynamic library and enable an existing object-oriented application with speech capability, as recited in claim 1.

We note that independent claims 5 and 9 also recite means for replacing an input component of the application program with

an alternate speech enabled input component. Similar to claim 1, these two claims require that an alternate object-oriented dynamic library supporting the same interface information provide the speech recognition capability for an existing application. Based on our analysis above, we find that the Examiner has failed to set forth a prima facie case of obviousness because the necessary teachings and suggestions to combine Speech and OODLL to replace an input component of the application program with one having an alternate object-oriented dynamic library to enable an existing object-oriented application with speech capability, are not shown. Accordingly, we do not sustain the 35 U.S.C. § 103 rejection of independent claims 1, 5 and 9, as well as claims 2-4, 6-8 and 10-12 dependent thereon, over Speech and OODLL.

CONCLUSION

In view of the foregoing, the decision of the Examiner rejecting claims 1-12 under 35 U.S.C. § 103 is reversed.

REVERSED

JERRY SMITH Administrative Patent Judge	)	
MICHAEL R. FLEMING Administrative Patent Judge	)	BOARD OF PATENT APPEALS AND INTERFERENCES
MAHSHID D. SAADAT Administrative Patent Judge	)	

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